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TITLE: Read-only recording medium on which information has been
prerecorded comprises a substrate having the information
recorded on surface, reflective layer formed of phase
change material on the substrate, dielectric layer and
mask layer

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PATENT-FAMILY:

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<u>WO</u> 2004088644 A1	October 14, 2004	EN
JP 2004310803 A	November 4, 2004	JA
US 20050009260 A1	January 13, 2005	EN
EP 1609139 A1	December 28, 2005	EN
TW 200426817 A	December 1, 2004	ZH
KR 2005114648 A	December 6, 2005	KO
CN 1768379 A	May 3, 2006	ZH
US 7166346 B2	January 23, 2007	EN
TW 247301 B1	January 11, 2006	ZH

JP 2007538346 W	December 27, 2007	JA
CN 100372001 C	February 27, 2008	ZH

DESIGNATED-STATES: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO
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CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT
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RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW AT BE
BG

BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL
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PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW AL AT BE BG CH CY CZ DE DK EE ES FI
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APPLICATION-DATA:

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WO2004088644A1	N/A	2004WO-KR000740	March 31, 2004
JP2004310803A	N/A	2003JP-098501	April 1, 2003
CN 1768379A	N/A	2004CN-80008389	March 31, 2004
CN 100372001C	N/A	2004CN-80008389	March 31, 2004
EP 1609139A1	N/A	2004EP-724900	March 31, 2004
US20050009260A1	N/A	2004US-813619	March 31, 2004
US 7166346B2	N/A	2004US-813619	March 31, 2004
EP 1609139A1	N/A	2004WO-KR000740	March 31, 2004
KR2005114648A	N/A	2004WO-KR000740	March 31, 2004
JP2007538346W	N/A	2004WO-KR000740	March 31, 2004
TW 200426817A	N/A	2004TW-109024	April 1, 2004
TW 247301B1	N/A	2004TW-109024	April 1, 2004
KR2005114648A	N/A	2005KR-716927	September 9, 2005
JP2007538346W	Based on	2006JP-507789	March 31, 2004

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CIPP	G11B7/007	20060101
CIPP	G11B7/24	20060101
CIPS	G11B7/005	20060101
CIPS	G11B7/24	20060101
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CIPS	G11B7/258	20060101

ABSTRACTED-PUB-NO: WO 2004088644 A1

BASIC-ABSTRACT:

NOVELTY - A read-only recording medium on which information has been prerecorded comprises a substrate having the information recorded on a surface, a reflective layer formed of a phase change material on the substrate, a first dielectric layer formed on the reflective layer and a mask layer formed of metal oxide on the first dielectric layer.

DESCRIPTION - A read-only recording medium on which information has been prerecorded comprises a substrate having the information recorded on a surface, a reflective layer formed of a phase change material on the substrate, a first dielectric layer formed on the reflective layer and a mask layer formed of metal oxide on the first dielectric layer. The recording medium further comprises a second dielectric layer between the substrate and the reflective layer.

INDEPENDENT CLAIMS are included for the following:

- (1) a method of optically reading information recorded on read-only recording medium; and
- (2) a reproducing apparatus for optically reading information recorded on read-only recording medium.

USE - For reading information recorded on super-resolution near-field structure (Super-RENS) ROM from both substrate and information sides.

ADVANTAGE - Provides better readout capabilities than conventional read-only-memory; provides higher density information recording and allows marks with a size below the optical resolution limit of a reproducing apparatus to be read with higher carrier-to-noise ratio (CNR).

EQUIVALENT-ABSTRACTS:

INORGANIC CHEMISTRY

Preferred Materials: The mask layer is a noble metal oxide (preferably platinum oxide, gold oxide, silver oxide or palladium oxide). The phase change material is selected from a compound of silver, indium, antimony and tellurium; carbon; a compound of germanium, antimony and tellurium; germanium; tungsten; titanium; silicon; manganese; aluminum; bismuth; nickel; palladium or tellurium.

TITLE-TERMS: READ RECORD MEDIUM INFORMATION PRERECORDED COMPRISE
SUBSTRATE

SURFACE REFLECT LAYER FORMING PHASE CHANGE MATERIAL DIELECTRIC
MASK

DERWENT-CLASS: L03 P73 T03

CPI-CODES: L03-G04B;

EPI-CODES: T03-B01B5G; T03-B01D1; T03-B01D6; T03-B01F5;

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CPI Secondary Accession Numbers: 2004-263009

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